

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1-37. (canceled)
38. (currently amended) A mouse monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591 or an antigen binding fragment thereof.
39. (withdrawn amended) An isolated antibody or antigen binding fragment thereof comprising a variable domain that (i) competes for binding with the antibody of claim 36 38, and (ii) binds FcγRIIB with greater affinity than said variable domain binds FcγRIIA.
40. (canceled)
41. (currently amended) A chimeric or humanized version of the mouse monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591 or an antigen binding fragment thereof.
42. (canceled)
43. (previously presented) A hybridoma cell line 2B6, having ATCC accession number PTA-4591.
- 44-50. (canceled)
51. (withdrawn amended) A method of treating cancer in a patient having a cancer characterized by a cancer antigen, said method comprising administering to said patient a therapeutically effective amount of a first IgG antibody, which is a chimeric or humanized version of the mouse monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof comprising a

~~variable domain that specifically binds FcγRIIB with greater affinity than said variable domain binds FcγRIIA, wherein said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell, and a second antibody that specifically binds said cancer antigen and is cytotoxic.~~

52. (withdrawn) The method of claim 51, wherein said cancer is breast, ovarian, prostate, cervical or pancreatic cancer.
53. (withdrawn) The method of claim 51, wherein said cytotoxic antibody is Herceptin®, Rituxan®, IC14, PANOREX™, IMC-225, VITAXIN™, Campath 1H/LDP-03, LYMPHOCIDE™, or ZEVLIN™.
54. (withdrawn) The method of claim 51, wherein said cancer antigen is MAGE-1, MAGE-3, BAGE, GAGE-1, GAGE-2, N-acetylglucosaminyltransferase, p15, beta-catenin, MUM-1, CDK4, HER-2/neu, human papillomavirus-E6, human papillomavirus-E7, or MUC-1.
55. (withdrawn) The method of claim 51, wherein said cancer antigen is a breast, ovarian, prostate, cervical, or pancreatic carcinoma antigen.
56. (withdrawn) The method of claim 51 further comprising the administration of one or more additional cancer therapies.
57. (withdrawn) The method of claim 56, wherein said additional cancer therapy is selected from the group consisting of chemotherapy, immunotherapy, radiation therapy, hormonal therapy, or surgery.
58. (withdrawn) The method of claim 51, wherein said patient is human.
59. (withdrawn amended) The method of claim 58, wherein said first antibody is a ~~human antibody or a humanized antibody version.~~

60. (withdrawn amended) A pharmaceutical composition comprising (i) a therapeutically effective amount of ~~the~~ a first antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof that specifically binds Fc γ R1B with greater affinity than said antibody or fragment thereof binds Fc γ R1A; (ii) a second cytotoxic antibody that specifically binds a cancer antigen; and (iii) a pharmaceutically acceptable carrier.
61. (withdrawn amended) The pharmaceutical composition of claim 60, wherein said first antibody is a ~~human or humanized antibody~~ version.
62. (withdrawn amended) The pharmaceutical composition of ~~claims~~ claim 60 or 61, wherein said second antibody is a human or humanized antibody.
63. (withdrawn) The pharmaceutical composition of claim 60 further comprising one or more additional anti-cancer agents.
64. (withdrawn) The pharmaceutical composition of claim 63, wherein said anti-cancer agent is a chemotherapeutic agent, a radiation therapeutic agent, a hormonal therapeutic agent, or an immunotherapeutic agent.
65. (withdrawn amended) A method of treating an autoimmune disorder in a patient in need thereof, said method comprising administering to said patient a therapeutically effective amount of an IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof comprising a variable domain that specifically binds the extracellular domain of Fc γ R1B with greater affinity than said variable domain binds Fc γ R1A, wherein said variable domain specifically binds Fc γ R1B that is endogenously expressed on the surface of a human cell.
66. (withdrawn) The method of claim 65, wherein said autoimmune disorder is rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, Rieter's Syndrome, psoriasis, or lupus erythematosus.

67. (withdrawn) The method of claim 65 further comprising administering to said patient a therapeutically effective amount one or more anti-inflammatory agents.
68. (withdrawn) The method of claim 65 further comprising administering to said patient a therapeutically effective amount one or more immunomodulatory agents.
69. (withdrawn) The method of claim 68, wherein at least one immunomodulatory agent is a small organic molecule.
70. (withdrawn) The method of claim 69, wherein the small organic molecule is methotrexate, leflunomide, cyclophosphamide, cyclosporin A, FK506, mycophenolate mofetil, rapamycin, mizoribine, deoxyspergualin, brequinar, malonitrolamide, steroid, or corticosteroid.
71. (withdrawn) The method of claim 67, wherein at least one anti-inflammatory agent is a non-steroidal anti-inflammatory drug.
72. (withdrawn) The method of claim 71, wherein the non-steroidal anti-inflammatory drug is aspirin, ibuprofen, diclofenac, nabumetone, naproxen, or ketoprofen.
73. (withdrawn amended) A method for treating or preventing an IgE-mediated allergic disorder in a patient in need thereof, comprising administering to said patient a therapeutically effective amount of an IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof comprising a ~~variable domain that specifically binds the extracellular domain of FcγRIIB with greater affinity than said variable domain binds FcγRIIA, wherein said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell and wherein said binding agonizes at least one activity of FcγRIIB.~~
74. (withdrawn) The method of claim 73, wherein said IgE-mediated allergic disorder is asthma, allergic rhinitis, gastrointestinal allergies, eosinophilia, conjunctivitis, or glomerular nephritis.

75. (withdrawn) The method of claims 65 or 73, wherein said patient is human.
76. (withdrawn) The method of claim 75, wherein said antibody is a humanized ~~antibody~~ or a human antibody version.
77. (withdrawn amended) A method of enhancing an antibody mediated cytotoxic effect in a subject being treated with a cytotoxic antibody, said method comprising administering to said patient an IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof, comprising a variable domain that specifically binds the extracellular domain of FcγRIIB with greater affinity than said variable domain binds FcγRIIA, wherein said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell, in an amount sufficient to enhance the cytotoxic effect of said cytotoxic antibody.
78. (withdrawn amended) A method of diagnosis of an autoimmune disease in a subject comprising: (a) contacting a biological sample from said subject with an effective amount of the antibody or a fragment ~~thereof of claim 1~~ claim 38; and (b) detecting binding of said antibody or fragment ~~thereof~~, wherein detection of said ~~detectable marker antibody or fragment~~ above a background or standard level indicates that said subject has an autoimmune disease.
79. (withdrawn amended) The method of claim 78, wherein said antibody or fragment comprises a detectable marker, which detectable marker is a chemiluminescent, enzymatic, fluorescent, or radioactive label.
80. (withdrawn amended) A method of enhancing an immune response to a vaccine composition in a subject, said method comprising administering to said subject an IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof comprising a variable domain that specifically binds FcγRIIB with greater affinity than said variable domain binds FcγRIIA, wherein said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a

human cell, and a vaccine composition, said antibody or fragment thereof being administered in an amount effective to enhance the immune response to said vaccine composition in said subject.

81-89. (canceled)

90. (currently amended) A pharmaceutical composition comprising (i) a therapeutically effective amount of an antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof comprising a variable domain that specifically binds the extracellular domain of FcγRIIB with greater affinity than said variable domain binds FcγRIIA, wherein said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell; and (ii) a pharmaceutically acceptable carrier.

91-92. (canceled)

93. (withdrawn amended) A method of treating cancer in a patient, said method comprising administering to said patient a therapeutically effective amount of an IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or a an antigen binding fragment thereof comprising a variable domain that specifically binds FcγRIIB with greater affinity than said variable domain binds FcγRIIA, wherein said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell.

94. (withdrawn amended) A method of treating a B cell malignancy in a patient, said method comprising administering to said patient a therapeutically effective amount of an IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or a an antigen binding fragment thereof comprising a variable domain that specifically binds FcγRIIB with greater affinity than said antibody or fragment thereof binds FcγRIIA, wherein said

~~variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell.~~

95. (withdrawn) The method of claim 94, wherein said B cell malignancy is non-Hodgkin's lymphoma.
96. (withdrawn amended) A method of treating a disease in a patient comprising administering to said patient a therapeutically effective amount of a first IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof comprising a variable domain that specifically binds FcγRIIB with greater affinity than said antibody or fragment thereof binds FcγRIIA, wherein ~~said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell,~~ and a second antibody, wherein said second antibody does not mediate its therapeutic effect by cell killing.
97. (withdrawn) The method of claim 96, wherein said second antibody is an anti-Fas antibody.
98. (withdrawn amended) A method of treating a solid tumor in a patient having a tumor characterized by infiltration of a population of macrophages at the site of the tumor, said method comprising administering a therapeutically effective amount of a first IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof ~~that comprising a variable domain that specifically binds FcγRIIB with greater affinity than said antibody or fragment thereof binds FcγRIIA,~~ wherein ~~said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell,~~ and wherein said antibody administration reduces the population of macrophages.
99. (withdrawn) The method of claim 98 wherein said antibody reduces the population of macrophages by at least 80%.

100. (withdrawn amended) A method of treating cancer in a patient having a cancer characterized by a cancer antigen, said method comprising administering to said patient a therapeutically effective amount of a first IgG antibody that is a chimeric or humanized version of the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591, or an antigen binding fragment thereof comprising a variable domain that specifically binds FcγRIIB with greater affinity than said antibody or fragment thereof binds FcγRIIA, wherein said variable domain specifically binds FcγRIIB that is endogenously expressed on the surface of a human cell, and a second antibody that does not bind said cancer antigen.
101. (withdrawn) The method of claim 100, wherein said second antibody binds a cancer antigen expressed on a cell surrounding a tumor cell.
102. (withdrawn) The method of claim 101, wherein said cell is a fibroblast cell or a stromal cell.
103. (withdrawn) The method of claim 102, wherein said cancer antigen is fibroblast activation protein.
104. (currently amended) The antibody of ~~claim 4~~ claim 41, further comprising at least one modification in the Fc region.
105. (previously presented) The antibody of claim 104, wherein said Fc region has an altered affinity for an FcγR.
106. (previously presented) The antibody of claim 104, wherein said Fc region binds FcγRIIA with a higher affinity than a comparable antibody comprising a wild-type Fc region binds FcγRIIA.
107. (original) The antibody of claim 104, wherein said antibody has an enhanced antibody mediated effector function relative to a comparable antibody comprising a wild-type Fc region.

108-110. (canceled)

- 111. (new) The antibody of claim 41 which is a humanized version of 2B6 or an antigen binding fragment thereof.
- 112. (new) The antibody of claim 41 which is a chimeric version of 2B6 or an antigen binding fragment thereof.
- 113. (new) The antibody of claim 41 which is a F(ab')₂ or a F(ab') fragment.
- 114. (new) The antibody of claim 41 which is a single chain antibody.
- 115. (new) The antibody of claim 41, wherein said antibody is operably linked to a heterologous polypeptide.
- 116. (new) The antibody of claim 115, wherein said heterologous polypeptide is an antibody that immunospecifically binds a cell surface receptor.
- 117. (new) The antibody of claim 116, wherein said heterologous polypeptide is an antibody that immunospecifically binds to a tumor antigen.
- 118. (new) The antibody of claim 41, wherein said antibody is conjugated to a therapeutic agent.
- 119. (new) The antibody of claim 118, wherein said therapeutic agent is a cytotoxin.
- 120. (new) The antibody of claim 119, wherein said cytotoxin is paclitaxel, cytochalasin B, gramicidin D, ethidium bromide, emetine, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone, glucocorticoids, procaine, tetracaine, lidocaine, propranolol, puromycin, epirubicin, or cyclophosphamide.
- 121. (new) The antibody of claim 41, wherein said antibody comprises at least one amino acid modification in the Fc region relative to a comparable wild-type Fc region.

122. (new) The pharmaceutical composition of claim 60, wherein said first antibody is a humanized version of 2B6, or an antigen binding fragment thereof.
123. (new) The pharmaceutical composition of claim 60, wherein said first antibody is a chimeric version of 2B6, or an antigen binding fragment thereof.
124. (new) The pharmaceutical composition of claim 60, wherein said first antibody is a fragment, which fragment is a F(ab')₂ or F(ab') fragment.
125. (new) The pharmaceutical composition of claim 90, wherein said antibody is a humanized version of 2B6, or an antigen binding fragment thereof.
126. (new) The pharmaceutical composition of claim 90, wherein said antibody is a chimeric version of 2B6, or an antigen binding fragment thereof.
127. (new) The pharmaceutical composition of claim 90, wherein said antibody is a F(ab')₂ or F(ab') fragment.
128. (new) An isolated antibody, or antigen binding fragment thereof, comprising a light chain variable region and a heavy chain variable region from the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591.
129. (new) An isolated antibody, or antigen binding fragment thereof, comprising a light chain variable region from the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591 wherein said antibody comprises a variable domain that specifically binds the extracellular domain of FcγRIIB with greater affinity than said variable domain binds FcγRIIA.
130. (new) An isolated antibody, or antigen binding fragment thereof, comprising a heavy chain variable region from the murine monoclonal antibody produced by clone 2B6, having ATCC accession number PTA-4591 wherein said antibody comprises a variable domain that specifically binds the extracellular domain of FcγRIIB with greater affinity than said variable domain binds FcγRIIA.

131. (new) The antibody of claim 129 or 130, wherein said binding agonizes at least one activity of FcγRIIB, which activity is selected from the group consisting of B cell receptor-mediated signaling and inhibition of FcεRI-induced mast cell activation.
132. (new) The antibody of claim 129 or 130 which inhibits B cell proliferation, antibody production, intracellular calcium influx, or activity of one or more downstream signaling molecules in the FcγRIIB signal transduction pathway.
133. (new) The antibody of claim 129 or 130 which enhances phosphorylation of FcγRIIB and/or recruitment of one or more downstream signaling molecules in the FcγRIIB signal transduction pathway.
134. (new) The antibody of claim 129 or 130, wherein said binding antagonizes at least one activity of FcγRIIB, wherein said at least one activity is selected from the group consisting of activation of B cell receptor-mediated signaling, and activation of FcεRI-induced mast cell activation.
135. (new) The antibody of claim 129 or 130 which enhances B cell proliferation, antibody production, intracellular calcium influx, or activity of one or more downstream signaling molecules in the FcγRIIB signal transduction pathway.
136. (new) The antibody of claim 129 or 130 which reduces phosphorylation of FcγRIIB and/or recruitment of one or more downstream signaling molecules in the FcγRIIB signal transduction pathway.
137. (new) The antibody of claim 129 or 130, wherein said antibody is a monoclonal antibody.
138. (new) A humanized version of the antibody of claim 129 or 130.
139. (new) The antibody of claim 129 or 130, wherein said antibody is a fragment, which fragment is a F(ab')₂ or F(ab') fragment.

140. (new) The antibody of claim 129 or 130 which blocks the binding of an Ig-Fc to FcγRIIB.